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AUTHOR Nelson, Ronald G.; Janzen, William B.
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ABSTRACT

This report presents research studies from the past 15 years which indicate that some alcoholics have been able to return to controlled, moderate drinking after behavioral treatment. Presented in this report are: (1) the techniques used to train alcohol abusers to moderate drinking; (2) the research methodologies used to measure the treatment effects of controlled drinking programs; (3) a discussion of the characteristics of controlled drinking candiates; and (4) two sample optional controlled drinking programs. It is hoped that if treatment with options other than abstinence is made available, many alcoholics who are currently untreated will seek and receive help. (Author/RF)

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BOX 6234 • UNIVERSITY, ALABAMA 35486

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EMPIRICAL APPROACHES TO THE TREATMENT OF ALCOHOL ABUSE: ALTERNATIVES TO ABSTINENCE

RONALD G. NELSON AND WILLIAM B. JANZEN

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Traditionally, the goal of treatment of alcoholism has been abstinence. Total cessation of drinking has been the criterion for recovery in the majority of treatment programs for years. However, over the past 15 to 20 years, reports have been surfacing in the alcoholism literature suggesting that alcoholics have been able to return to "normal" or "moderate" drinking. More recently data have been reported which indicate that alcoholics have been able to achieve "controlled" drinking after behavioral treatment. These findings have led others to question many of the basic tenets of the traditional "disease" concept of alcoholism. Thus a major controversy has arisen in the alcoholism field; a controversy which many have come to label the "controlled drinking controversy".

Abstinence Only

Central to the abstinence concept in alcoholism treatment has been its advocacy by Alcoholics Anomymous. The stand of "AA" from its inception has been quite clear, as witnessed by this statement in the organization's basic text (Alcoholics Anonymous, 1955), "... there is no such thing as making a normal drinker out of an alcoholic" (p. 480). This stand has proven to hold wide-

spread influence throughout the field, primarily because of AA's success in helping thousands of alcohol abusers overcome destructive lifestyles via "sobriety".

However, AA is not alone in its advocacy of abstinence. Throughout the alcoholism literature of the past 35 years one finds almost unanimous support for the position that abstinence is the only acceptable goal for the recovering alcoholic. In 1941 Strecher insisted, "The highest hurdle that the alcoholic patient must finally succeed in clearing is the acceptance of a completely non-alcoholic future" (p. 14). Lolli (1949) strongly suggested the same, "Because the addictive drinker cannot revert to controlled drinking, his goal must be permanent abstinence" (p. 408). This view was reaffirmed by many in the 1950's (Bowman, 1956; Triebout, 1951; and Bacon, 1958).

Beginning in the 1960's the "Dean of the alcohologists" himself, E. M. Jellenick (1960), continued the abstinence--only trend in his classic text, The Disease Concept of Alcoholism. Many others followed suit. Glatt (1967) stated that although a small minority of alcoholics may be able to return to moderate drinking, "Abstinence remains the only safe way for the alcohol addict" (p. 272). The National Institute of Mental Health strongly supported abstinence in their public statement of 1969, "Most specialists hold that no alcoholic can learn to drink moderately and regard statements to the contrary as unwise and dangerous."

This view continues to prevail in the 1970's. The National Council on Alcoholism (NCA, 1974) has strongly supported abstinence throughout the 1970's and in a recent review of the controversy, Fox (1976) emphasized "...I think it is very unsafe to advocate any treatment goal except abstinence" (p. 237). In a recent article O'Brien (1976) declared we should discourage research into controlled drinking because, "abstinence is the best decision" (p. 4).

Moderate Drinking by Alcoholics

In 1962 Davies in his article "Normal Drinking in Recovered Alcoholics," began the process of bringing into focus something which had been developing for several years: an alternative to abstinence as the only goal in treatment of alcoholism. He found in a follow-up study of 93 alcoholics seven to 11 years after their discharges from Maudsley Hospital, London, that seven of them had returned to "normal" drinking. All seven were men who had experienced severe alcohol abuse problems prior to treatment. Although he continued to advise alcohol abusers to aim for total abstinence, Davies' suggested that the generally accepted view that no alcohol addict can ever again drink normally be modified. Davies article was not the first indication that alcoholics might become normal drinkers. In 1956 Norwig and Nielson reported that 42 of 221 former alcoholism patients who were drinking occasionally were doing well two to five years after treatment. In 1957

Pfeffer and Berger found on follow-up that seven of 60 patients had changed their pattern of drinking. Selzer and Holloway (1967) reported that 16% of 83 patients had returned to "social" drinking after treatment. Other researchers had reported similar findings (Lemere, 1953; Moore & Ramseur, 1960). But it was Davies' article which attracted widespread attention and thus gave rise to what would later be called the controlled drinking controversy.

Davies' article had such impact that 16 leaders in the alcoholism field (Various Correspondents, 1963) quickly responded in a series of articles. The criticism of Davies was intense. Some suggested that the incidents he cited were simply "spontaneous recoveries" similar to those observed in cancer patients; others insisted that his cases were not true addicts; and still others chastized Davies for the potentially negative effect his article might have on sober alcoholics.

But the momentum had swung, and soon several other studies which concluded that some alcoholics could control their drinking were published. In 1965, R. E. Kendell in the course of a follow-up of 62 untreated alcohol addicts found four who had been drinking normally for three to eight years. In 1967 Bailey and Stewart found on follow-up of 12 subjects, whom they had earlier classified as alcoholics with some history of moderate drinking, six who were drinking "normally". Pattison, Headley, Gleser, and Gottschalk (1968) found in a follow-up study of 32 alcoholics,

approximately 20 months after discharge from treatment, 11 who had successfully returned to moderate drinking. Reinert and Bowen (1968), although openly skeptical of normal drinking by alcoholics, did find four moderate drinkers in a sample of 156 alcoholic patients interviewed one year after treatment at Topeka Administration Hospital. And several other studies (Kendell & Stanton, 1966; Pokorny et al., 1968; Orford et al., 1970; Fitzgerald et al., 1971; Goodwin, 1971; Kish & Hermann, 1971) provided additional evidence of "normal" drinking by alcoholics.

The most widely known and discussed study which has reported successful return to drinking by alcoholics is the "Rand Report" (Armor, Polich, & Stambul, 1976). While Davies served to stir a fire of controversy in the scientific community, the Rand Report propelled the controversy into the wider professional and lay community. The study was a survey designed by the prestigious Rand Corporation for the purpose of evaluating the effectiveness of numerous treatment centers supported by the National Institute on Alcohol Abuse and Alcoholism (NIAAA). Questionnaires were administered to 11,500 men who had sought help at these centers. The questionnaires were filled out 6 and 18 months after the men had completed treatment or been discharged without treatment. They found that the majority of the former patients described themselves not as long-term abstainers but as moderate drinkers or as individuals engaged in alternate periods of drinking and abstention.

The report stated that the results suggest, "...some alcoholics can return to moderate drinking with no greater chance of relapse than if they abstained" (Armor et al., 1976, p. VI).

The Rand researchers went to great lengths to qualify their statements. They acknowledged the study's small sample size, short follow-up periods, insisted that abstinence is still the treatment of choice, and stated that no sober alcoholic should return to drinking. They pleaded that they were simply reporting the fact that some alcoholics appear to have stabilized at moderate drinking levels 18 months after treatment, but this was not heard in the ensuing uproar. The report drew the wrath of the alcoholism "establishment." The National Council on Alcoholism, Alcoholics Anonymous, and numerous other groups, professionals, and private citizens denounced it outright. The report has been rightly or wrongly blamed for numerous instances of return to drinking by recovered alcoholics throughout the country. Researchers have also criticized the report's methodology, including extended comments by several authors published recently (Various Correspondents, 1977). Some of the criticisms include: the over-reliance on self-reports, the basing of conclusions on a small portion of the total number of subjects because of poor response to questionnaires, and the misleading use of statistics such as masking small numbers with percentages.

Despite shortcomings, the Rand Report is without question the

single event in the history of this controversy that has brought the issue of moderate drinking by alcoholics to the layman's awareness.

Summary of Follow-up Studies

Table I presents a summary of the data from the studies we have reviewed which reported "normal," "social," or "moderate" drinking by alcoholics.

Insert Table I about here

The table should be interpreted cautiously in view of the small sample sizes and questionable follow-up techniques in many cases. Also, the definition of the "moderate drinker" varies among the studies. Despite these reservations, Table I presents sufficient samples over extended periods to offer some tentative conclusions. First, one might conclude that in a given population of alcoholics one would expect approximately 11% to achieve moderate drinking with or without treatment. This is in agreement with Pattison's (1976) estimate of 10-15%. Consequently, any program designed to train alcoholics to moderate their drinking would have to demonstrate a success rate in excess of 11% in order to be judged effective. Second, one can conclude that moderate drinking appeared to be as viable an option for the alcoholic population as abstinence.

There was no significant difference between the percentage of subjects who succeeded at moderating their drinking and those who were able to maintain abstinence (11.2% vs 11.8%). This would suggest that moderate drinking might not be as unique an outcome as is widely believed. It must be emphasized, however, that well-designed, long-term follow-up studies are needed in this area before any firm conclusions can be made.

Abstinence Attacked

Exploration into alternatives to abstinence, initiated by Davies' article and supported by later reports, led to the critical examination of the abstinence concept itself and of Jellenick's (1960) "disease concept" upon which it was based. This latter concept emphasizes "loss of control" drinking, where one alcoholic drink initiates a chain reaction so that alcoholics are unable to only have one or two drinks, but continue drinking. However, Mello and Mendelson (1971), after a quantative analysis of the drinking patterns of 15 alcoholics given unrestricted access to alcohol, concluded that their observations gave no empirical support to the traditional notion of craving. Merry (1966) gave alcohol to alcoholics disguised as a vitamin preparation and was unable to detect any evidence of increased craving for alcohol. Sobell, Sobell and Christelman (1972) were not able to determine any evidence of loss of control in their alcoholic patients after intake of either

small or large amounts of alcohol. Gottheil, Alterman, Skoloda and Murphy (1973) found that 44% of their alcoholic patients when given an opportunity to drink, drank no alcohol at all and 23% began and stopped, even though alcohol continued to be available in the experimental setting. Thus, many researchers have concluded that loss of control after the first drink is not inevitable and have called for a thorough rethinking of the disease concept (Robinson, 1972; Davies, 1974; Keller, 1976).

Pattison (1968, 1976) has attacked the abstinence concept in several articles which suggest that insistence on abstinence as the sole criterion of success may prevent alcoholics from obtaining therapeutic assistance. Many patients cannot achieve abstinence and thus avoid returning to counselors with an "abstinence only" approach. Furthermore, Pattison has stressed that the social, vocational, and psychological welfare of the patient is as important as changing his drinking pattern, and the assumption that abstinence will immediately bring improvements in these areas is not warranted. As evidence Pattison cites Gerard (1962) who found that in a group of totally abstinent "successes," 43% were "overtly disturbed," 24% "conspicuously inadequate," 12% "AA addicts" and only 10% "independent successes." Thus many significant and even critical treatment goals may be easily overlooked when abstinence alone is emphasized. He also criticizes the abstinence-only approach because it leads to the punishment or rejection of the nonabstinent

alcoholic; may drive many discouraged treatment personnel out of the field of alcoholism; may be in itself preventing the possibility of controlled drinking by many alcoholics; and may be forcing many to adopt a lifestyle in conflict with a society that values ability to drink. Other authors, (Evans, 1973; Popham and Schmidt, 1976; Canton, 1968; and Freed, 1973) have also come to question abstinence as the only acceptable goal of alcoholism treatment.

Attempts to Train Alcoholics to Control Their Drinking

Challenges of the abstinence and the disease concepts have resulted in efforts to train alcoholics to become "controlled" drinkers. Such efforts are certainly needed to validate the claims that alternatives to abstinence in alcoholism treatment are feasible. Until the early 1970's when behavioral treatment efforts began, the critics of the controlled drinking option had much to criticize. There were many weaknesses in the reports of alcoholics returning to normal drinking. Since the numbers were small and treatment had not emphasized moderate drinking, the results might just be "spontaneous remissions" similar to those found in cancer research. The survey procedures were fraught with problems: results were often based totally on self-reports and recall of the former patients which raised the question of validity; interviews were often done by individuals who provided the treatment which raised the possibility of bias; and operational definitions of terms like "normal

drinking," "social drinking," "doing well" and "good adjustment" were conspicuously absent from the surveys or were very unclear. This made comparison of survey results practically impossible. The "loss of control" research has also been criticized by those who insist that the moderation achieved by alcoholics under the highly controlled experimental conditions would be impossible for alcoholics in the "real world" where social pressures are intense (Paredes, 1972). Thus, in order to answer the critics, well-designed research was needed to evaluate the potential of teaching alcoholics controlled drinking. The following is a review and critical evaluation of several research studies with moderate drinking goals.

Lovibond and Caddy

The hope of many experimenters was that alcoholics could change their patterns of severe abuse into patterns of moderation via behavior modification. One of the earliest attempts at effecting such a change was a study by Lovibond and Caddy in 1970.

These researchers attempted to train 31 alcoholics on an outpatient basis to discriminate accurately various blood alcohol levels (BAL's) with the hope that such learned discrimination would assist the alcoholic in controlled drinking. In the initial discrimination training segment subjects learned the various behavioral effects of different blood alcohol levels and then received visual feedback, via readings on a large meter, to assist them as they

attempted to estimate various BAL's. In the second segment the subjects were allowed to drink but were shocked intermittently when they exceeded a specific BAL. The treatment consisted of six to 12 two-hour sessions over a 16-week period. Twenty-eight of the subjects completed the treatment. However, of the 13 control subjects who received identical treatment except that the shock was administered on a random, noncontingent basis, only five completed the treatment.

During the 16-week treatment period and a follow-up period of between 4 to 34 weeks, subjects and relatives or significant others were interviewed concerning the specifics of their drinking behavior and were asked to estimate daily BAL levels. Lovibond and Caddy found 21 of the experimental subjects drinking in a "controlled" fashion. Three other experimental subjects were drinking less than prior to treatment but exceeding the assigned BAL once or twice a week. Control subjects returned to pretreatment levels of consumption.

Although Lovibond and Caddy's study presents evidence that alcoholics can exert control over their drinking for periods of time, there are several reasons why their findings should be viewed as tentative. First, follow-up data were available for only three of the successful experimental subjects for as long as 34 weeks, while for the majority of the alcoholics follow-up data were available only for 4 to 14 weeks. This follow-up duration is too short to serve

as a basis for firm conclusions. The authors concede this but still label these subjects as "complete successes." Second, two-thirds of the control subjects dropped out of the experiment. Third, the use of a therapist with an investment in the outcome to carry out treatment with both the experimental and the control groups may have introduced bias. Fourth, there was no indication whether the follow-up procedure included a means of determining that the subjects had actually used BAL discrimination as an aid to controlled drinking or whether they counted their drinks. Fourth, Lloyd et al. (1975) have pointed out that the shock schedule used with controls appeared to establish a five-minute shock-free period of safety discriminated by a drinking response. Since the authors excluded shock two minutes before and three minutes after any control subject drank, they may have actually reinforced drinking by the control subjects.

Silverstein, Nathan and Taylor

Silverstein, Nathan and Taylor (1974) attempted a modified replication of the Lovibond and Caddy study. Four chronic "gamma" alcoholic subjects were trained over a 10-day period on an in-patient basis, by feedback, social reinforcement and token reinforcement methods to estimate their own BAL's. They were then to maintain BAL's within given limits during a subsequent 3-week period. Subjects successfully learned to estimate BAL. However, the accuracy of estimation diminished whenever feedback on accuracy

was withdrawn. After discharge the subjects were to send in pre-addressed postcards containing specific information about drinking habits. Attempts were also made to corroborate this information through contacts with relatives and friends. At the end of an 80-day period only one subject had succeeded in controlling his drinking and the impression was that he used a method other than BAL estimation. The authors conclude that this study provides additional evidence that alcoholics under certain circumstances can learn to control their drinking.

One has to question how much evidence for controlled drinking this study provides in light of the small sample size, failure of patients to discriminate BAL without almost constant feedback, and the poor results after a relatively brief follow-up period. The results of the study simply do not appear to justify the authors' conclusions. The most obvious conclusion appears to be that BAL is not a highly successful technique to teach controlled drinking.

The Baltimore Group

A group of researchers at Baltimore City Hospitals have carried out a series of experiments in a controlled inpatient setting attempting to train skid-row alcoholics to moderate their drinking via a contingency management procedure. No follow-up studies were attempted and thus only limited conclusions can be drawn. In two of the studies (Cohen, Liebson, Faillace & Allen, 1971; Bigelow, Cohen, Liebson & Faillace, 1972) involving five and 19

chronic "gamma" alcoholics respectively from the emergency rooms of the Baltimore Hospitals, participation in an enriched environment was made contingent upon abstinence or moderate drinking. Each study was of 5-week duration and during three of the weeks residents could participate in recreational activities, work for money in the hospital laundry, use a private phone and enjoy the benefits of other luxuries, if they drank 5 oz. or less of alcohol daily. Whenever they exceeded this limit they remained in an impoverished environment without these "extras." During the other 2 weeks the residents remained in an impoverished environment irrespective of their drinking patterns. In both experiments subjects drank 5 oz. or less daily during the contingent weeks and significantly more than that amount (usually up to the 24 oz. daily limit) during non-contingent weeks. Whether the subjects remained in an impoverished or enriched environment during non-contingent weeks did not effect the outcome.

Cohen, Liebson and Fallace (1971) attempted to train four chronic "gamma" alcoholics to moderate their drinking in the same inpatient setting. However, this time they were paid money for abstinence or for terminating alcohol intake for a period of 1-day after various priming doses. All four residents were able to moderate their drinking. However, the magnitude of the reinforcement had to be increased as the priming dose and the delay of reinforcement increased.

These three studies demonstrated that under extremely controlled experimental situations some alcoholics can moderate their drinking habits with the aid of rigid manipulation of environmental contingencies. The results certainly challenge the convictions of those who insist that alcoholics, under any and all conditions, will "lose control" of their drinking. The authors suggest that powerful reinforcers such as money, shelter, counseling, and medical services be made available to the alcoholic contingent on abstinence or moderation of drinking, rather than only upon excessive drinking. However, in light of the studies, small sample sizes and lack of concern with evaluating long-term effects via follow-up, their immediate applicability to alcoholism treatment is limited.

In a more recent study (Strickler, Bigelow & Lawrence, 1976) moderate drinking patterns were established in three alcohol abusers on an outpatient basis via nonaversive procedures. The treatment was conducted in an inpatient, barroom setting and consisted of four phases: abstinence, supervised moderate drinking practice, internal perception of BAL, and moderate drinking in a party situation. The stress was on the development of moderate drinking behaviors appropriate to specific situations. Two of the three subjects acquired a moderate drinking style during treatment and on follow-up were maintaining the moderate drinking after 6 months. The results provide evidence that some alcoholics; can maintain moderate

drinking for a period of time after treatment. However, the small sample size, short follow-up period and reliance on self-reports during follow-up prevent conclusive interpretations.

John A. Ewing

In 1970 Ewing of the Center for Alcohol Studies at the University of North Carolina attempted a 12-week clinical pilot study through which he hoped to evaluate the feasibility of teaching alcoholics moderate drinking habits on an outpatient basis using behavioral techniques. He has reported on the details of this program in a series of articles (Ewing & Rouse, 1973; Ewing, 1974a, 1974b) including a 5-year follow-up study (Ewing, 1976) in which he reports the failure of his clients to maintain their mutual goal of controlled drinking. In the original study, 21 "gamma" alcoholics, who had either failed at Alcoholics Anonymous or refused participation, were treated with a variety of approaches: group therapy, couples therapy, modeling, Lovibond and Caddy's (1970) discriminated aversive conditioning and other behavioral techniques for modifying excessive drinking habits. In a preliminary follow-up study, six subjects who had completed the minimum of 12 treatment sessions were contacted personally or by telephone during a period of 13 to 29 months. Significant others were also contacted to verify information provided by subjects on their drinking

patterns. Of the six, three were found to be drinking in a controlled manner and three others were doing poorly. Ewing categorized such results as "showing promise" for the possibility of training alcoholics to drink in a controlled manner via outpatient treatment.

However, in a later follow-up study of 14 subjects (who had completed a minimum number of six treatment sessions) carried-out during a period 27 to 55 months after the end of treatment, Ewing concluded that the pilot study was a total failure. Based on a scoring system which rated drinking behavior, personal relations, and work and health history after treatment, he concluded that all 14 subjects had done poorly in all areas. Nine of the 14 had decided that they must be totally abstinent.

It is difficult to evaluate either Ewing's preliminary or final results because of several methodological problems. First, in the preliminary findings, no detailed pretreatment baselines were presented, no controls were utilized, a very small number of subjects were eligible for follow-up, and the follow-up period was very short. Furthermore, in the final follow-up, it is difficult to evaluate the outcomes because of the nature of Ewing's scoring system. He does not present periodic or monthly subject scores in the various areas but only final scores which are the poorest scores the subjects had made after completion of treatment. This means that an alcoholic who drank to excess only one time was

categorized identically to an alcoholic who drank to excess every day. His criterion for success appears to be exorbitantly high, as witnessed by his statement, "...for the alcoholic, even one bout of loss of control can be damaging in many ways and, we believe, represents a poor outcome of therapy" (Ewing, 1976, p. 131). Thus it appears that his scoring system is biased toward failure. It is also curious that he dropped the minimum number of sessions needed for completion of treatment from 12 to six for this follow-up.

Despite the fact that Ewing's outcomes have received widespread publicity, it is questionable how much one can reasonably conclude concerning controlled drinking from his confusing methodology. He did not claim that he was carrying out a well-designed treatment procedure, but merely a tentative pilot study. He was right, and it should be seen as exactly that and not used as evidence against controlled drinking.

Mills, Sobell and Schaefer

The most systematic and sophisticated treatment-oriented research on controlled drinking has been done by researchers at Patton State Hospital in California. The work was begun by Mills, Sobell, and Schaefer. In the initial phase of their work, (Schaefer, Sobell & Mills, 1971) they studied the drinking habits of six male alcoholics and compared their patterns with social drinkers in a

realistic bar setting at the hospital. Types and number of drinks were recorded as well as the number of sips per drink. The researchers found that the alcoholics ordered straight drinks, gulped rather than sipped their drinks, and ordered more drinks. In a later study, (Sobell, Schaefer & Mills, 1972) 26 hospitalized alcoholics were compared with 23 social drinkers and the authors again noted similar behavioral differences between alcoholics and social drinkers. These studies were impressive in that they were the first systematic attempts to determine drinking baselines and drinking patterns before any modification procedures were begun. This provides for individualized treatment plans and greater accuracy in measuring treatment effects. Subsequently, Mills, Sobell and Schaefer (1971) designed a treatment program through which they hoped to modify by avoidance conditioning the three maladaptive drinking behaviors identified in the baseline studies. Thirteen "chronic" alcoholics (alcohol abusers who had experienced withdrawal symptoms and numerous hospitalizations) were treated in a realistic bar setting in the hospital. The key behaviors of gulping, heavy drinking and straight alcohol drinking were punished by painful electric finger shock. When the subjects drank in a social fashion they avoided the shock. A control group of equal size received no treatment. All of the alcoholic subjects learned to moderate their drinking within 12 to 14 sessions. During a

6-week follow-up via personal interview, 12 of the 13 experimental subjects and none of the control subjects were found to be drinking socially and three experimental plus two of the control subjects were abstinent. In a vaguely reported 6-month follow-up, the subjects reported more alcoholic behavior including "drunk days" than during the 6-week follow-up. In a later 12-month follow-up reported by Schaefer (1972) four of the 13 alcoholics were judged to be drinking socially and three were abstinent. Of the controls, only two were abstinent and none were drinking in a controlled or social manner. The authors viewed these results as encouraging, especially since no attempts were made to generalize the behavioral pattern of drinking acquired by the alcoholics in the inpatient setting. They concluded that alcoholics can be taught to modify their drinking behavior in a hospital setting and continue such for a period after treatment.

There are many excellent aspects of this research by the Patton Hospital researchers. The use of baselines, control groups, operational definitions and relatively detailed analysis of follow-up data is to be commended. However, there are also problems with the research. First, since the controls did not receive an equal amount of treatment with a similar goal, it is possible that the differences in outcome are due to motivational factors, effects of the attention provided by treatment, or other factors rather than

the treatment itself. Second, one might question the validity of using interviews after 6-month periods which depend on the recall of clients and collaterals in determining post-treatment drinking patterns. Regular random checks carried out with shorter temporal durations are preferable. Third, the method of evaluating progress appears to be questionable. Alcoholics were labeled "abstinent" during a 2-week period even if they had been drinking heavily for up to 50% of the time. Finally, it has been suggested that one might question how realistic a bar situation can be with electrical cords connected to individuals' fingers and bartenders who mix your drink and then shock you (Lloyd & Salzberg, 1975).

The Sobells

M. B. Sobell and L. C. Sobell (1973) continued and expanded the work of the Patton group. In a study of 70 hospitalized male "gamma" alcoholics they attempted to modify drinking patterns through a variety of behavioral methods: training of socially-accepted drinking behavior, videotape feedback of drunken behavior, avoidance conditioning, response repertoires for specific drinking situations, and various educational techniques. Forty of the subjects requested a controlled drinking goal and 30 an abstinence treatment goal. The subjects in each group were then randomly assigned to either an experimental group receiving the various behavioral treatments or a control group receiving conventional therapy. Thus there were four

groups in all: controlled drinking-experimental (CD-E), controlled drinking-control (CD-C), non-drinking-experimental (ND-E), and non-drinking-control (ND-C).

Six-month, 12-month (Sobell & Sobell, 1973), and 24-month (Sobell & Sobell, 1976) follow-up studies were carried out. The follow-ups were done every 3 to 4 weeks via personal contact with the subject and three to four collateral sources. At each periodic check ratings of the subject's drinking disposition, vocational status, use of community supports, and interpersonal adjustment were obtained. Although both experimental groups appeared to be doing equally well during the first 12 months, only the CD-E subjects continued to function significantly better than their controls throughout the full 2-year follow-up period.

The Sobells' study and follow-up is certainly the most systematic and well-designed program to evaluate controlled drinking to date. Their emphasis on periodic contact with subjects during follow-up and insistence on three to four collateral checks plus detailed evaluation of other areas of life functioning is a significant improvement over earlier research. Their positive results give greater credence to controlled drinking as a treatment option than any other study. However, there are some limitations to their study. First, since all follow-up interviews were carried out by one of the two experimenters, some experimenter bias may be present,

as well as subject bias in reporting positive results. Second, since those who became controlled drinking subjects initially chose that particular goal and had either outside social support for such behavior or successful experience with social drinking in the past, there is the possibility that motivation and specific personality characteristics may be confounding factors in the outcomes. Third, since the control groups received traditional group therapies and the experimental groups highly individualized behavioral treatment, placebo effects of attention may also have played a role in the final outcome. Fourth, Chalmers (1974) has criticized the Sobells for distinguishing "drunk" from "controlled drinking" by one ounce of alcohol. Fifth, Madsen (1974) has been critical of the Sobells being able to define a person as "controlled drinker" when he is "drunk" up to 25% of his drinking days. He also suggests that the trained alcoholics only look good because they are being compared to alcoholic control subjects and not judged on a reasonable therapeutic scale.

Vogler, Compton and Weissbach

A later study by a Patton State Hospital group was carried out by Vogler, Compton and Weissbach (1975). This continued the trend

of well-designed research in controlled drinking begun by the Sobells and others at Patton. The study involved 56 inpatient alcoholics and was designed to evaluate the effectiveness of a combination of behavior modification techniques in moderating alcoholics' drinking patterns. Fourteen of the subjects dropped out of the study after a few sessions, but the remaining 42 were randomly assigned to one of two groups. In group-1 the 23 subjects were trained by behavioral techniques such as videotaped confrontation of intoxicated behavior, BAL discrimination training, and aversion training for overconsumption. Group-2, which consisted of 19 subjects and served as a control, received only behavioral counseling and educational procedures. Drinking histories and baseline drinking sessions were obtained. Inpatient treatment lasted for 4 to 6 weeks and "booster sessions" were held for a 1-year period. Follow-up by personal interview was done by a male field representative who had no previous contact with the subjects. He was also blind regarding treatment. Some subjects who lived at a distance were contacted by phone or questionnaire. Collateral sources were contacted in a similar manner.

During the 12-month follow-up period, seven subjects in each group were found to be abstinent. Eight subjects from Group-1 and four subjects from Group-2 were found to be "controlled" drinkers,

(i.e., average intake of less than 50 ounces per month and no more than one uncontrolled episode per month) and a total of 16 "relapsed" (eight in each group). In analyzing between-group differences in specific drinking and drinking-related behaviors, the authors found that Group-1 lost significantly fewer days from work and consumed less alcohol. They concluded that behavior modification techniques can be effective in moderating alcoholics drinking patterns over a 1-year period.

This research is impressive for several reasons: the utilization of random assignment, a control group, baseline drinking sessions, a follow-up interviewer not directly connected with the study, and operational definitions. One could argue that a definition of controlled drinking which permits one uncontrolled drinking episode monthly is too liberal. However, the study does add support to the controlled drinking alternative.

Another similar research project by this group (Vogler, Weissbach & Compton, 1977) was done later but on an outpatient basis with subjects whose drinking problems were less severe and whose families and jobs were relatively intact. Many of these "problem drinkers" were referred to the study as a result of the legal consequences of drinking, particularly drunk driving. Eight subjects participated and were divided into four groups. Group-1 (23 subjects) received videotaped feedback of drunken behavior, aversion training for over-

consumption, BAL discrimination training, alternatives training, behavior counseling and alcohol education; Group-2 (19 subjects) received only the latter four methods; Group-3 (21 subjects) received alcohol education only, and Group-4 (17 subjects) only received the last three methods. The objective was to compare the effectiveness of various combinations of behavioral treatments, a condition missing from all other studies. The subjects were interviewed monthly by a field representative during a 12-month follow-up period. At 12 months 50 (62.5%) of the 80 subjects were found to be "moderate" drinkers (intake less than 50 ounces absolute alcohol per month and no more than one drinking episode per month during which the BAL exceeded 80 mgs.) and three (4%) were found to be abstinent. No significant difference was found between groups. The alcohol intake of subjects who received only alcohol education was equal to that of subjects who received all the behavioral methods.

The most significant contribution of this study, besides its positive outcome, is its attempt to discern the behavioral techniques which were most effective in training alcohol abusers to moderate their drinking. However, the study demonstrated that alcohol education provided in one-half the time was just as effective as behavioral treatments. The data suggest the possibility that behavioral techniques may be no more effective in training the moderate alcohol abuser to control his drinking than education and counseling.

Summary of Controlled Drinking Studies

The number of well-designed research projects on controlled drinking reported in the literature is minimal but growing. A number of the studies have suffered from lack of control groups, operational definitions and pretreatment drinking baselines. Other criticisms include inadequate follow-up procedures, absence of statistical analyses, small sample sizes, and in some cases conclusions which are simply not supported by the data.

Despite existing difficulties in comparing the studies, Table 2 presents a summary of those studies using comparable dependent measures and having a follow-up. Conclusions drawn from this table must be tentative; but it does appear that researchers are reporting

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Insert Table 2 about here

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significantly higher success rates (43.3%) in training alcoholics to control their drinking than the base rate of 11% obtained in Table 1. This suggests that alcoholics can be taught to moderate their drinking. Furthermore, a significant percentage (13.9%) of the subjects in controlled drinking studies are attaining abstinence. This percentage is at least equal to abstinence rates found in abstinence oriented treatment programs.

Discussion

What are the Characteristics of the Controlled Drinking Candidate?

Answering this question has been extremely difficult throughout the period of this controversy. Back in 1963 Selzer (various correspondents, 1963) commented, "...as for the problem of distinguishing the alcoholic who ultimately returns to normal drinking from his more numerous fellows, I find myself at a loss" (p. 113). Trying to identify the significant personality characteristics of a good controlled drinking candidate has been especially frustrating. The Sobells (1973) found no significant correlation between particular personality characteristics and success at controlled drinking in their studies, and Vogler et al. (1975) also did not. Popham and Schmidt (1976) and Pattison (1968) found that educational background, employment status and sex were not helpful predictors.

There is agreement among some researchers that pretreatment level of consumption may be a good predictor. Popham and Schmidt (1976) concluded that this was the only reliable predictor and thus suggested controlled drinking only for patients with a relatively low pretreatment consumption level and abstinence for the heavy drinkers. Vogler et al. (1975, 1977) obtained similar results. Orford (1973) and Orford et al. (1976) have reported that the successful controlled drinking subjects reported less symptomology at

intake. However, Pattison (1968) found that symptomology at intake was very similar in alcoholics found later to be abstinent, controlled drinkers, or pathological drinkers.

Numerous researchers believe that a helpful predictor may be the alcohol abuser's present extent of social support: support of family, friends and employer. Strickler et al. (1976) concluded that support of spouse and family was crucial and the Sobells (1973) made adequate social support one prerequisite for admission into their controlled drinking experimental group. Pattison (1968) concluded that social competence and support may be the key factors in return to normal drinking, and Lovibond and Caddy (1970) made concerted efforts to include in treatment the family members of their controlled drinking subjects.

Thus, there remains disagreement and speculation as to what characteristics facilitate controlled drinking. Certainly more research needs to be done before any firm conclusions can be drawn. Tentatively, one might conclude that pretreatment consumption level and extent of social support are probably significant factors.

Should Controlled Drinking be Recommended to Anybody?

This second question touches the core of the present controversy. Since the amount of quality research on this issue to date is limited and the findings tentative, why consider controlled drinking

for anybody? Probably the best response is to note that so many alcohol abusers fail at abstinence. Orford et al. (1976) found in a 2-year follow-up of 50 alcoholics that only 2% had been able to actually follow the total abstinence route, and eventually this percentage became zero. Vallance (1965) obtained a similar result in his 2 -year follow-up study. Pattison (1976) and others have stressed that insistence on abstinence may prevent many from even seeking treatment, because it is a goal they simply will not accept. Many may want help but see total abstinence as too radical a step for them.

Thus, there may be an incalculable number of alcohol abusers who are not receiving treatment because of the insistence on abstinence. This could be a good criterion for determining who should become a controlled drinking candidate. As Pomereau et al. (1976) have suggested, maybe the best candidates at this time for controlled drinking are those alcohol abusers who have continually failed at abstinence or simply will not accept abstinence-oriented treatment. It is obvious that the needs of these individuals deserve to be met and they must, by definition, be met outside the present abstinence-oriented treatment methodology.

It could be that in utilizing the above criterion, we will discover the most appropriate candidates and also a possible resolution to the controlled drinking controversy. Such a criterion

does not suggest that those who are succeeding at abstinence or willing to try it should do otherwise. However, for those who continually fail after numerous attempts, or simply won't accept an abstinence goal, here is an alternative.

For those who would condemn this suggestion out of fear that any attempts at implementing controlled drinking programs will decrease the number of abstainers, there are some preliminary indicators that controlled drinking programs may actually increase the number of abstinent alcoholics while teaching some to moderate their drinking. The Sobells (1973) commented on a peculiar phenonemon in their results: a good number of their controlled drinking subjects chose abstinence in the end. Vogler et al. (1975) were impressed with the large number of subjects who became abstinent in spite of the moderation orientation of their study. In almost every study reviewed in the previous section, a significant number of controlled drinking subjects chose abstinence. A plausible explanation for this phenomenon is that after making sincere effort at utilizing the behavioral techniques to control their drinking, some of the subjects simply became convinced that for them abstinence was the only way. If this is true, the controlled drinking alternative may assist some alcoholics to moderate their drinking while actually aiding other alcoholics to become abstinent.

For those who claim that any attempts at implementing such programs would covertly encourage individuals with relatively mild

drinking problems to continue drinking and increase the severity of their problem, we would suggest that the exact opposite may actually be the case. As strong a case can be made for the idea that alternatives to abstinence will encourage individuals with less severe drinking problems to seek treatment before they reach chronic alcoholism status. Many persons on the road to severe problems might consider methods of controlling their alcohol consumption before the more drastic abstinence goal. A controlled drinking option could lead to the prevention of more serious alcohol abuse through the teaching of moderating techniques at a stage when the chances of success are high (Strickler et al., 1976).

In addition we have a commitment to treat the impoverished alcohol abuser who has minimal social support. However, we often punish him for his pathology by not permitting him to remain in residential treatment centers (half-way houses) when he drinks. However, the great majority of chronic alcohol abusers will drink and thus place themselves outside the care of traditional alcoholism treatment. The controlled drinking alternative may be an answer to this dilemma. Facilities which would accept the fact that these individuals will drink, and thus not insist on abstinence but attempt to shape the residents' drinking into more constructive patterns, may have the potential of reaching these individuals when traditional abstinence-oriented facilities would not. Thus, con-

trolled drinking does not have to be in competition with an abstinence orientation but they can work cooperatively and increase the number of alcohol abusers being treated, and thereby increase the number of "successes," in the form of abstinent or controlled drinkers.

Two Controlled Drinking Programs

It may be premature to delineate an ideal controlled drinking program in light of the minimal amount of quality research that has been done in this area. However, the widespread evidence that many alcohol abusers are not receiving treatment demands that we begin to conceptualize and implement such programs. After reviewing the literature at least two treatment programs are suggested. The first (Program A) would be offered for the alcohol abuser who still has significant social support and stability (home, family, and job) and the second (Program B) would be offered for the chronic, impoverished alcoholic with minimal social support. Both programs would include procedures for referral to abstinence treatment if consistent failure at moderation is experienced. In neither program would a person be punished through termination for excessive alcohol abuse. Beginning both programs with inpatient treatment might be preferable because it provides an opportunity for intensive application of techniques over a short duration. However, Program

A would utilize outpatient treatment because most moderate alcohol abusers, for which this program is designed, would probably not accept admission to inpatient care. Furthermore, some success at training alcohol abusers to control their drinking in an outpatient setting has been demonstrated (Strickler et al., 1976, Vogler et al., 1977). Program B would utilize an initial inpatient setting due to the chronic nature of the alcohol problems of the population for which it is designed, and the lack of social support for most of them.

Program A. This program would begin with intensive twice-weekly outpatient sessions to educate the alcoholic about the aversive effects of excessive alcohol intake and to introduce behavioral techniques to be implemented for modifying drinking patterns. During the initial period the clients would complete detailed drinking baselines and drinking histories. Subsequently, maladaptive drinking patterns would be identified. Individualized treatment plans would then be implemented to alter the maladaptive drinking habits (gulping, ordering "straight" drinks, drinking alone, stopping at bar daily after work).

Various behavioral techniques would be utilized in assisting the alcoholics to achieve their individualized weekly treatment goals. This would involve behavioral education to modify specific excessive drinking habits, training to develop constructive response

repertoires to situations which previously provoked excessive drinking (stimulus control), and modeling of moderate drinking behavior by therapists as well as role-playing by clients of socially acceptable drinking behavior (Sobell and Sobell, 1973). Modeling and training would take place in a simulated barroom setting. Aversion training would be implemented for maladaptive drinking habits (Mills et al., 1971) as well as videotaped feedback of drunken behavior at special sessions (Sobell and Sobell, 1973). We are not convinced that blood alcohol level (BAL) estimation has demonstrated much promise and it would not be used in this program. Besides the training and practicing of moderate drinking behavior which would take place in the twice-weekly sessions, clients would be given specific "homework" involving maintenance of agreed-upon levels of consumption, practice of moderate drinking habits at home or in social situations, and practice of new constructive responses to situations which previously provoked excessive drinking. Spouses, relatives, or friends attending the sessions with the clients would assist in monitoring the completion of this homework. In some cases contracts with spouses could be utilized to formalize the spouses' role in supporting the clients' attempts at modifying drinking patterns (Miller, 1972). The thrust of this second phase of treatment is to attempt to utilize operant techniques in a multi-modal approach to decrease excessive drinking behavior and

increase moderate drinking behavior. This was the common goal of the most successful and well-designed controlled drinking studies reviewed earlier.

The third and final phase of treatment would involve a gradual decrease in frequency of sessions and an increase in emphasis on generalization of moderate drinking behaviors to the home and work situation. Thus, sessions would shift to weekly and then monthly and finally intermittent "booster" sessions when needed. In turn, greater stress would be placed on evaluation of homework, setting of long-term goals, and developing the role of significant others to support the clients' efforts. Sessions would be held with spouses and relatives to encourage them in their critical roles and provide them with necessary training to effectively deal with the clients behavior (Cheek, 1971). The "booster" sessions would provide remedial help for those clients experiencing difficulties (Vogler et al., 1975).

Program B. This program would begin on a inpatient basis since it would be serving alcoholics with long-term alcoholism histories who also lack social support. The program would have a contingency management orientation similar to the program Cohen et al. (1971a) utilized successfully with skid-row alcoholics. The alcoholics would earn the right to participate in an "enriched environment" and to obtain spending money (Cohen et al., 1971b) by moderating their drinking. Behavioral techniques, including videotaped feedback of

drunken behavior and aversive conditioning for over-consumption, would be used to assist the clients in achieving and maintaining moderation. After a designated period of inpatient treatment, alcoholics who do not moderate their drinking would be encouraged towards abstinence.

Those who succeed in moderating their drinking in an inpatient setting would be transferred to a half-way house where similar contingency management procedures would be available. Moderate drinking would be permitted in the house but abstinence would be required when on pass in the community. Participation in an enriched environment would be withdrawn for drinking on pass or excessive drinking in the house. However, the alcoholic would not be refused admission into the house because of excessive drinking. Hopefully, as Cohen et al. (1971a) have conjectured, moderate drinking opportunities in the house would serve to reinforce abstinence in the community. Drinking would be restricted to one room in the house in an effort to shape "social" drinking habits. Eventually residents would attempt moderate drinking in the community under supervision. This would not be allowed until a stable moderate-drinking pattern was established in the house.

There exists fear that giving alcohol to alcoholics in such a setting would lead to chaos. On the contrary, Paredes et al. (1974) found that introducing alcohol into an open ward setting did not

increase the attrition rate or the amount of aggressive behavior among residents. Those who continue to do well in the half-way house would be given vocational counseling, assistance in finding employment, and encouragement to find independent living quarters. Booster treatment would be available as needed.

Final Comment

The controlled drinking controversy has a relatively brief history and is probably far from resolved. Quality experimentation in this area is minimal to date and thus the issue remains controversial. However, it is also widely suspected that thousands of alcoholics go untreated because of the lack of options in alcoholism treatment. We must commit ourselves to designing treatment with options other than abstinence and to training capable staff in alternative techniques. Controlled drinking programs such as described in Program A and B are certainly worthy of consideration as we carry out this effort.

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Table 1

Percentage of Moderate Drinkers and Abstainers

Found During Various Follow-up Studies

Study	Date	No. Subjects	% Moderate Drinkers	% Abstainers	Follow-up Period
Lemere	1953	500	3%	11%	Record Review[a]
Norwig & Nielson	1956	221	19%	17%	2-5 yrs.[a]
Pfeffer & Berger	1957	60	8%	80%	4 yrs.[a]
Selzer & Holloway	1957	98	12%	18%	6 yrs.[a]
Moore & Ramseur	1960	100	5%	15%	3.5 yrs.[a]
Davies	1962	93	7.5%	NA	7-11 yrs.[a]
Kendell	1965	62	6.5%	NA	3-8 yrs.[b]
Kendell & Stanton	1966	66	8%	15%	4-15 yrs.[a]
Bailey & Stewart	1967	13	46%	8%	5 yrs.[b]
Pattison	1968	32	34%	34%	1.5 yrs.[b]
Pokorny et al.	1968	88	26%	28%	1 yr.[a]
Reinert & Bowen	1968	156	2.5%	20%	1 yr.[a]
Fitzgerald et al.	1971	217	32%	34%	4 yr.[a]
Goodwin	1971	176	10%	4%	8 yrs.[b]
Kish & Hermann	1971	173	5%	12%	1 yr.[a]
Orford et al.	1976	100	10%	9%	2 yrs.[b]
Rand	1976	7,130	10%	10%	1.5 yrs.[a]
Totals		9,064	11.2%	11.8%	

Note: The totals do not include the Davies (1962) or Kendell (1965) studies because abstinence data was not available (NA).

[a]after treatment

[b]after no treatment

Table 2

Percentage of Moderate Drinkers and Abstainers

Found During Follow-ups of Controlled Drinking Studies

Study	Date	No. Subjects	% Moderate Drinkers	% Abstainers	Follow-up Period
Lovibond & Caddy	1970	31	67.7%	0%	1-8 mos.
Silverstein et al.	1974	4	25%	0%	2.5 mos.
Strickler et al.	1976	3	66.6%	0%	6 mos.
Ewing	1975	21	0%	42.9%	5 yrs.
Mills et al.	1971	13	30.8%	23.1%	1 yr.
Vogler et al.	1975	56	21.4%	25%	1 yr.
Vogler er al.	1977	80	62.5%	4%	1 yr.
Totals		208	43.3%	13.9%	